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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/658,490
Filing Date: September 08, 2003
Appellant(s): HAGERMOSER ET AL.

Nick Baumann
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on December 02, 2008 appealing from the Office action mailed on September 24, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

The following grounds of rejection of the claims, disclosed in the Final Office action mailed September 24, 2008 are omitted in the brief.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie, Pryor, and Neuman, and further in view of Nagasaka (US 2004/0195031).

Claims 24, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie and Pryor, and further in view of Reighard (US 5,423,569).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie, Pryor, and Neuman and further in view of Pepper (US 4,755,634).

Claims 11 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie, Pryor, and Neuman, and further in view of Redmayne (US 5,650,597).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

7,109,978	Gillespie et al.	09-2006
7,084,859	Pryor	08-2006
5,942,815	Neuman et al.	08-1999

2004/0195031	Nagasaka	10-2004
5,423,569	Reighard et al.	06-1995
4,755,634	Pepper, Jr.	07-1988
5,650,597	Redmayne	07-1997

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-7, 9-11, 13-16, 28-38, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie (US 7,109,978) and Pryor (US 7,084,859), and further in view of Neuman (US 5,942,815).

As to claim 1, Gillespie teaches a touch input device ("*capacitive touch sensor*") [abstract lines 1-3] for interacting with electronic systems ("*computing devices*") [col. 1 lines 28-33], comprising:

a surface ("*insulating layer 36*") [fig. 2d] accessible to and touchable by an user of the input device [col. 6 lines 30-32]

a capacitive touch sensor ("*capacitive touch sensor pad*") configured so that a touch applied on the surface ("*insulating layer 36*") of the input device forms a circuit through the surface to the touch sensor (the capacitive coupling between the touch and the touch sensor is equivalent to a capacitor being existed between the touch and the touch sensor) that allows capacitive coupling between the touch and the touch sensor through the surface [col. 6 lines 28-32] [fig. 2d], the touch sensor adapted for connecting

to a controller ("*arithmetic unit*") that uses signals generated by the capacitive coupling to interact with electronic systems [col. 54 lines 29-37].

Gillespie does not expressly teach the touch input device to interact with multiple electronic systems included in the vehicle.

However, Pryor teaches a concept of implementing a capacitive touch panel ("*10*") [fig. 1c] used for interacting with multiple electronic systems [col. 56 lines 22-24] included in a vehicle [abstract lines 1-6], in a steering wheel of the vehicle, which includes an airbag [fig. 1c] [col. 7 lines 26-30 and col. 17 lines 13-17].

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Pryor's concept of using a capacitive touch panel as an inputting means for interacting with multiple electronic systems included in a vehicle and of implementing the capacitive touch panel in a steering wheel, to the touch input device of Gillespie, in order to provide fast response of sensing while maintaining immunity to high levels of electrical interference for a controlling means for interacting with multiple electronics of a vehicle.

Gillespie [Gillespie: fig. 2d] as modified by Pryor teaches the capacitive touch sensor being disposed behind an airbag cover (note that since, in the combination of Gillespie and Pryor, the "*insulating layer 36*" is the most front surface of the steering wheel and the airbag is included in the steering wheel, the "*insulating layer 36*" is a part of the airbag cover, which is an airbag surface).

Gillespie as modified by Pryor does not expressly disclose the capacitive touch sensor to be disposed between an airbag and an airbag cover.

However, Neuman teaches a structure of placing a capacitive sensor between an airbag ("*704*") and an airbag cover layer ("*cover layer 702*") [fig. 7].

It would have been obvious to one of ordinary skill in the art at the time of the invention to place the capacitive touch sensor of the input device of Gillespie as modified by Pryor between an airbag and an airbag cover, as taught by Neuman, in order to allow the user of the device of Gillespie as modified by Pryor to activate the input device without activating the airbag of the steering wheel.

Gillespie as modified by Pryor and Neuman inherently teaches the capacitive touch sensor being configured to reduce interference with airbag deployment since it is required for any car to deploy the airbag included in a steering wheel when it is necessary, regardless of the type of the components or parts of the car included in the steering wheel and thus Pryor inherently teaches a concept of configuring the capacitive touch sensor (which is a component/part of the vehicle included in the steering wheel) to reduce interferences with the airbag deployment.

As to claim 2, Gillespie as modified by Pryor and Neuman teaches the vehicle being an automobile [Pryor: fig. 1c].

As to claim 3, Gillespie as modified by Pryor and Neuman teaches an airbag cover [Neuman: fig. 7].

Gillespie as modified by Pryor and Neuman does not expressly disclose the airbag cover to include a surface comprising a relief pattern making the designated area.

However, examiner takes official notice that it is well known in the art at the time of the invention to include a relief pattern making a designated area, such as writing a text "*airbag*" on the surface of an airbag cover.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the surface of the airbag of Gillespie as modified by Pryor and Neuman to include a relief pattern making a designated area, in order to allow the device user of the device to recognize the existence of the airbag easily.

As to claim 4, Gillespie as modified by Pryor and Neuman teaches the airbag cover being on a steering wheel [Pryor: fig. 1c].

As to claims 5 and 7, Gillespie as modified by Pryor and Neuman does not teach the steering wheel incorporating additional touch sensors or additional capacitive sensors being positioned between the airbag and the airbag cover.

However, the courts have been held that a mere duplication of parts for a multiplied effect is generally recognized as being within the level of ordinary skill in the art. *St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8, 11 (7th Cir. 1977)*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement additional capacitive touch sensors between the airbag and the airbag cover in the steering wheel of the device of Gillespie as modified by Pryor and Neuman to provide additional access to various electrical subsystems for the occupants of a vehicle.

As to claim 6, Gillespie as modified by Pryor and Neuman does not teach the airbag cover being on a passenger side of the vehicle.

However, the courts have been held that a mere change of location of parts is generally recognized as being within the level of ordinary skill in the art. *In re Japikse, 86 USPQ 70 (CCPA 1950)*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include an airbag cover and an airbag on a passenger side of the vehicle of Gillespie as modified by Pryor and Neuman to provide additional safety to the passenger of the vehicle.

As to claim 9, Gillespie teaches the capacitive touch sensor being an x-y sensor [abstract lines 1-3].

As to claims 10 and 11, Gillespie as modified by Pryor and Neuman does not expressly disclose the capacitive touch sensor being a quadrant segmented sensor or a scroll bar sensor.

However, since the applicants have failed to disclose that specifying the type of the capacitive touch sensor as a quadrant segmented sensor or a scroll bar sensor provides an advantage, is used for a particular purpose, or solves a state problem, it is an obvious matter of design choice to specify the type of the touch sensor as a quadrant segmented sensor, or a scroll bar sensor.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any one of a x-y sensor, a quadrant segmented sensor, and a scroll bar sensor, as the capacitive touch sensor since any type of the sensor would perform equally well at processing capacitive touch-input information.

As to claims 13-15, Gillespie teaches the capacitive touch sensor comprising a substrate ("*substrate 24*") [fig. 2d].

Gillespie does not expressly teach a substrate of a capacitive touch sensor to comprise paper, cloth, or plastic.

However, since the applicants have failed to disclose that specifying the substrate of the capacitive touch sensor to be comprised of any one of paper, cloth, or plastic provides an advantage, is used for a particular purpose, or solves a state problem, it is an obvious matter of design choice to specify the substrate of the capacitive touch sensor to comprise any one of paper, cloth, or plastic.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any one of nonconductive materials such as paper, cloth, and plastic for the substrate of the capacitive sensor since any one of nonconductive material would perform equally well at preventing particles being transferred or leaked from the capacitive touch sensor

As to claim 16, Gillespie as modified by Pryor and Neuman teaches the airbag cover providing a substrate (Gillespie: "*insulating layer 36*") for the capacitive touch sensor [Gillespie: fig. 2d].

As to claim 28, all of the claim limitations have already been discussed with respect to the rejection of claim 1 except for that the presence of the touch sensor maintains the look, feel, and functionality of the surface as if the touch sensor was excluded and the capacitive touch sensor is integrated with the surface in the vehicle and configured to enable unimpeded safety functionality of the surface in the vehicle

(since it is required for any car to deploy the airbag included in a steering wheel when it is necessary, regardless of the type of the components or parts of the car included in the steering wheel and thus Pryor inherently teaches a concept of configuring the capacitive touch sensor to enable unimpeded deployment of the airbag).

Gillespie teaches that the presence of the touch sensor maintains the look, feel, and functionality of the surface as if the touch sensor was excluded since the surface ("*insulating layer 36*") covers the whole portion of the touch sensor [fig. 2d].

Gillespie as modified by Pryor teaches the capacitive touch sensor being integrated with the surface in the vehicle [Pryor: fig. 1c] and configured to enable unimpeded safety functionality of the surface in the vehicle.

As to claims 29, 30, 32, and 33, Gillespie as modified by Pryor and Neuman [Pryor: fig. 1c] teaches the surface being a surface of a steering wheel (Pryor: "10"), a dashboard (Pryor: "13"), a center console (Pryor: "11"), or an arm rest (Pryor: "14").

As to claims 31 and 34, Gillespie as modified by Pryor and Neuman does not expressly disclose the surface being a visor or a seat cover.

However, the courts have been held that a mere change of location of parts is generally recognized as being within the level of ordinary skill in the art. *In re Japikse, 86 USPQ 70 (CCPA 1950)*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to place the input device of Gillespie as modified by Pryor and Neuman on a visor or a seat cover of a vehicle, in order to provide multiple ways of accessing the input device to the occupants of the vehicle.

As to claim 35, all of the claim limitations have already been discussed with respect to the rejection of claim 27.

As to claim 36, Gillespie [fig. 2d] teaches the capacitive touch sensor ("*capacitive touch sensor pad*") being an off-display capacitive touch sensor characterized by an absence of a display screen.

As to claim 37, Gillespie teaches the surface ("*insulating layer 36*") [fig. 2d] being not a display screen.

As to claim 38, Gillespie as modified by Pryor and Neuman teaches the capacitive touch sensor comprising a projected capacitive touch sensor (the capacitive touch sensor of Gillespie is capable of detecting touches through dielectric layer) and the surface comprises an opaque surface (Gillespie: "*insulating layer 36*") [Gillespie: fig. 2d].

As to claim 42, Gillespie as modified by Pryor and Neuman teaches the capacitive touch sensor being embedded in the airbag cover [Pryor: fig. 1c, the airbag cover is the cover of the center portion of the steering wheel].

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie, Pryor, Neuman as applied to claims 1-7, 9-11, 13-16, 28-38, and 42 above, and further in view of Nagasaka (US 2004/0195031).

Gillespie as modified by Pryor, Neuman teaches a capacitive touch sensor button.

Gillespie as modified by Pryor and Neuman teaches the capacitive coupling being calibrated to generate for the button one of a button down signal and a button up signal [col. 5 lines 31-33].

Gillespie as modified by Pryor, Neuman does not teach the capacitive touch sensor button being disposed within a spoke of the steering wheel.

However, Nagasaka [fig. 1] teaches a touch sensor button disposed within a spoke of the steering wheel.

It would have been obvious to one of ordinary skill in the art at the time of the invention to specify the device of Gillespie to be disposed within a spoke of a steering wheel, as taught by Nagasaka, in order to provide a convenient access to the inputting device.

Claims 23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie in view of Pryor.

As to claim 23, Gillespie teaches a method of making a touch input device ("*capacitive touch sensor*") [abstract lines 1-3], comprising:

providing a capacitive touch sensor ("*capacitive touch sensor pad*") configured so that a touch to a designated area of a surface ("*insulating layer 36*") of the input device allows capacitive coupling between the touch and the touch sensor through the surface [col. 6 lines 28-32] [fig. 2d],

connecting the touch sensor to a controller ("*arithmetic unit*") [col. 54 lines 29-37]; and

using signals generated by the capacitive coupling to interact with electronic systems [col. 54 lines 29-37].

Gillespie does not expressly teach the method comprising providing an airbag cover configured for enclosing an airbag in a vehicle and for providing a finished surface, disposing the capacitive touch sensor on a back surface of the airbag cover opposing the finished surface, using the capacitive touch sensor to interact with one of radio controls, a heads-up display, a heating/cooling blower, a navigation system, and a hands-free phone of the vehicle.

However, Pryor teaches an idea of providing an airbag cover (the exterior surface of the steering wheel) [col. 7 lines 26-28] configured for enclosing an airbag in a vehicle and for providing a finished surface, disposing the capacitive touch sensor on a back surface of the airbag cover opposing the finished surface, using the capacitive touch sensor to interact with one of radio controls [col. 56 lines 22-24], a heads-up display, a heating/cooling blower, a navigation system, and a hands-free phone of the vehicle [abstract lines 1-6].

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Pryor's idea of using a capacitive touch panel as an inputting means for a radio included in a vehicle, to the touch input device of Gillespie, in order to provide fast response of sensing while maintaining immunity to high levels of electrical interference for a controlling means for electronics of a vehicle.

Gillespie as modified by Pryor inherently teaches configuring the capacitive touch sensor to minimally interfere with airbag deployment since it is required for any car to

deploy the airbag included in a steering wheel when it is necessary, regardless of the type of the components or parts of the car included in the steering wheel and thus Pryor inherently teaches a concept of configuring the capacitive touch sensor (which is a component/part of the vehicle included in the steering wheel) to minimally interfere with airbag deployment.

As to claim 27, Gillespie as modified by Pryor teaches marking the designated area with a relief pattern.

Gillespie as modified by Pryor does not expressly disclose that the relief pattern can be discerned by a user's tactile senses.

However, the Examiner takes official notice that it is well known in the art to have a pattern, figure, or drawing such as a horn-shaped figure on a steering wheel that can be discerned by a user's tactile senses.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Gillespie as modified by Pryor to comprise a relief pattern on a designated area to be discerned by a user's tactile senses, in order to allow the user to find a location of the electronic components placed under the steering wheel cover, and thus to operate the electronic components easily.

Claims 24, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie and Pryor as applied to claims 23 and 27 above, and further in view of Reighard (US 5,423,569).

As to claim 26, Gillespie as modified by Pryor does not teach the step of disposing the capacitive touch sensor on the back surface of the airbag cover comprising disposing the touch sensor in a mold and molding the airbag cover using the mold so that the touch sensor is embedded in the back surface of the airbag cover.

However, Reighard [col. 5 lines 13-19] teaches a method of implementing an electronic component ("*force sensing resistor*") in an airbag comprising disposing an electronic component in a mold and molding the airbag cover using the mold so that the electronic component is embedded in the airbag cover.

It would have been obvious to one of ordinary skill in the art at the time of the invention to adopt the idea of Reighard to implement an electronic component in an airbag using a mold, in the device of Gillespie as modified by Pryor, and to specify the method of disposing the capacitive touch sensor on the airbag cover to comprise disposing the sensor in a mold and molding the airbag cover using the mold, as taught by Reighard, in order to simplify the manufacturing process for the airbag cover including the sensor by combining a molding process for the airbag cover and a process for implementing the sensor on the airbag cover into a single process.

As to claims 24 and 25, Gillespie as modified by Pryor does not teach the step of disposing a capacitive touch sensor on the back surface of the airbag cover comprising transferring conductors forming the touch sensor from a decal layer to the back surface of the airbag cover or laminating the touch sensor to the back surface of the airbag cover.

However, as the Examiner acknowledges that the transferring or the laminating processes for disposing the sensor on the airbag cover, disclosed in claims 24 and 26 is not a required manufacturing process for the sensor implementation, but is one process out of many alternative manufacturing processes, it is an obvious matter of design choice to adopt such process in order to dispose the sensor on the airbag cover.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to adopt any one of methods such as transferring conductors forming the touch sensor from a decal layer to the back surface of the airbag cover, laminating the touch sensor to the back surface of the airbag cover, or molding the airbag cover using a mold including the sensor, since any one of the methods would perform equally well at disposing the capacitive touch sensor on the back surface of the airbag cover.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie, Pryor, Neuman, and further in view of Pepper (US 4,755,634).

Gillespie as modified by Pryor and Neuman teaches the capacitive touch sensor being an x-y sensor, as discussed with respect to the rejection of claim 9.

Gillespie as modified by Pryor and Neuman does not teach the capacitive touch sensor being a quadrant segmented sensor.

However, Pepper [fig. 1] teaches an idea of building a capacitive touch senor by using a quadrant segmented sensor ("*quadrant electrodes 1*, *2*, *3*, and *4*").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the capacitive touch sensor of the touch input device of Gillespie as modified by Pryor and Neuman to use a quadrant segmented sensor as a sensing means instead of using an x-y sensor, in order to reduce the number of wires carrying the signals generated by the touch-input, and thus to simplify the structure of the circuitry of the touch input device.

Claims 11 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillespie, Pryor, Neuman, and further in view of Redmayne (US 5,650,597).

As to claim 11, Gillespie as modified by Pryor and Neuman teaches the capacitive touch sensor being an x-y sensor, as discussed with respect to the rejection of claim 9.

Gillespie as modified by Pryor and Neuman does not teach the capacitive touch sensor being a scroll bar sensor.

However, Redmayne [fig. 2] teaches an idea of building a capacitive touch sensor by using a scroll bar sensor [abstract lines 1-3].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the capacitive touch sensor of the touch input device of Gillespie as modified by Pryor and Neuman to use a scroll bar sensor as a sensing means instead of using an x-y sensor, to reduce proximity effects and noise [abstract lines 3-6].

As to claim 39, Gillespie as modified by Pryor, Neuman, and Redmayne teaches the scroll bar sensor comprising an analog slider scroll bar touch sensor (note that the

capacitive touch sensor of Redmayne comprises a plurality of horizontal sensor bars detecting capacitance change, which is a characteristic of analog signal processing and detecting horizontal movement of touch) [col. 10 line 17 – col. 11 line 11].

As to claim 40, Gillespie as modified by Pryor, Neuman, and Redmayne teaches the scroll bar sensor comprising a set of discrete sensor pads ("*horizontal sensor bars*") [abstract lines 1-3].

(10) Response to Argument

Claims 1 and 28 - "*A. The cited references teach away from a capacitive touch sensor disposed between the airbag and the airbag cover*" [Appeal, pg 7]

The Applicant emphasizes [Appeal, pg 8 bottom portion] that Pryor discloses, "*Some requirements of an Automobile display/touch sensor could arguably be at least the following: 1. Sturdy - ... 7. Not sacrifice airbag function – thus must not be where the airbag is, or the airbag/and sensor module must be of another design (one of which is disclosed herein)*" and explains [Appeal, pg 9 top portion] the differences between Pryor's figures 3 and 4, and concludes [Appeal, pg 9 2nd full paragraph], "*Consequently, Gillespie as modified by Pryor results in, at most, a readable/each-to-touch sensor forward of an airbag. Thus, the combination does not provide a touch sensor disposed behind an airbag cover, as argued by the Examiner*".

Examiner respectfully disagrees.

First of all, regarding the Applicant's above conclusion [Appeal, pg 9 2nd full paragraph], the fact of whether Gillespie as modified by Pryor results in a

readable/each-to-touch sensor forward of an airbag or not does not explain anything regarding whether the combination of the references, i.e. Gillespie and Pryor, provides a touch sensor disposed behind an airbag cover or not. Second, as cited by the Applicant, Pryor discloses, "*Not sacrifice airbag function – thus must not be where the airbag is, or the airbag/and sensor module must be of* ***another design*** *(****one of which is disclosed herein****)*". Pryor merely discloses that the touch sensor should not sacrifice airbag function and thus the touch sensor must not be where the airbag is unless the touch sensor has another design, but does not disclose the touch sensor having the structure which is same as the structure of Gillespie's touch sensor cannot be implemented where the airbag is. Accordingly, Examiner respectfully submits that the Applicant's arguments regarding the obviousness of combining the references based on the quoted part of Pryor's specification is improper because the quoted part of Pryor's specification does not exclude Gillespie's touch sensor from being one of various alternate designs of an airbag which can be implemented in a steering wheel.

Claims 1 and 28 – "*1. The purported combination changes the principle operation of the references.*" [Appeal, pg 9]

The Applicant argues [Appeal, pg 9 last full paragraph] that modifying Gillespie in view of Pryor and Neuman would render Gillespie unsatisfactory for its intended purpose of keeping capacitive coupling large since the combination of the references would result in replacing Gillespie's thin insulating layer with the airbag cover or requiring the entire structure illustrated in figure 2d of Gillespie be disposed between an airbag and its cover.

Examiner respectfully disagrees.

As clearly explained in the Final Office Action mailed on September 24, 2008 [pg 6 3rd full paragraph], the combination of the references would result in Gillespie's thin insulting layer being the most front surface (emphasis added) of the steering wheel and being a part of the airbag cover included in the steering wheel. Accordingly, Examiner respectfully submits that the Applicant's interpretation regarding the combination of the references is incorrect and thus the above arguments that the combination of the references would change the principle operation of Gillespie's touch sensor are not persuasive.

The Applicant further argues [Appeal, pg 10 1st full paragraph] that modifying Gillespie in view of Pryor and Neuman would render Pryor unsatisfactory for its intended purpose of providing a sensor that can be touched with a pen.

However, Examiner respectfully submits that the modifying Gillespie in view of Pryor is not based on the concept of incorporating the whole structure of Pryor's touch sensor into the structure of Gillespie's touch sensor, but is merely based on the concept of using Pryor's idea, i.e. including a touch sensor in a steering wheel, to determine where to place Gillespie's touch sensor. Accordingly, Examiner respectfully submits that the Applicant's arguments that the combination of the references would change the principle operation of Pryor's touch sensor are not persuasive.

Claims 1 and 28 – "*2. Critical differences between the claims and the references have been ignored.*" [Appeal, pg 10]

The Applicant argues [Appeal, pg 10 3rd full paragraph] that Gillespie's touch sensor is incompatible with a capacitive touch sensor disposed between an airbag and an airbag cover or with a capacitive touch sensor disposed behind a surface in a vehicle.

However, Examiner respectfully submits that the Applicant has failed to explain why Gillespie's touch sensor is incompatible with a capacitive touch sensor disposed between an airbag and an airbag cover or with a capacitive touch sensor disposed behind a surface in a vehicle. Furthermore, the structure of the capacitive touch sensor disclosed in the claims is taught by Gillespie and the claims do not disclose any specific element that would differentiate the capacitive touch sensor of the instant invention from Gillespie's touch sensor and would allow only the capacitive touch sensor of the instant invention to be compatible with a capacitive touch sensor disposed between an airbag and an airbag cover or with a capacitive touch sensor disposed behind a surface in a vehicle.

The Applicant's arguments regarding the quoted part of Pryor's specification [Appeal, pg 10 4th paragraph] are not persuasive for the same reasons disclosed in page 13 last paragraph - page 14 1st paragraph of this correspondence. The Applicant arguments that Pryor's touch screen should not be behind an airbag cover or between an airbag and an airbag cover [Appeal, pg 10 5th paragraph] are not persuasive for the same reasons disclosed in pg 15 1st and 2nd paragraph of this correspondence.

Claims 1 and 28 – "*B. The pending claims are non-obvious under KSR.*" [Appeal pg 10]

The Applicant argues [Appeal, pg 10 last full paragraph], "*Relying upon KSR, Appellant's position is that a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.*".

However, Examiner respectfully submits that the concept behind the modification of Gillespie in view of Pryor and Neuman is not combining the whole structures/components of each of the references together, but is merely using the concepts of Pryor and Neuman to determine where to place/use Gillespie's touch sensor.

The Applicant's arguments disclosed in page 11 1st full paragraph of the Appeal Brief are not persuasive for the same reasons disclosed in page 15 1st and 2nd full paragraphs (regarding the applicant's arguments that Pryor's touch screen would not be touchable/readable) and disclosed in page 14 2nd and 3rd full paragraphs (regarding the Applicant's arguments that the airbag cover would not be thin enough to keep the capacitive coupling large) of this correspondence.

Claims 1 and 28 – "*C. Obviousness cannot be proven merely by showing that a known composition could have been modified by routine experimentation or solely on the expectation success.*" [Appeal, pg 11]

Regarding the Applicant's arguments disclosed under Section C on page 11 of the Appeal Brief, Examiner respectfully submits that the Applicant merely cites a recent opinion of the Board of Patent Appeals and Interferences, but the Applicant has failed to

explain how the recent opinion of the Board of Patent Appeals and Interferences would support the Applicant's arguments.

Claims 1 and 28 – "***D. That the capacitive touch sensor is configured to reduce interference with airbag deployment is not inherent in the cited references, nor would this claimed feature be recognized as inherent by persons of ordinary skill.***" **[Appeal, pg 12]**

The Applicant argues [Appeal, pg 12 2nd and 3rd full paragraphs] that none of the cited references teach or suggest touch sensors in relationship to deployed airbags.

Examiner respectfully disagrees.

Pryor teaches a concept of placing a touch sensor in a steering wheel which includes an airbag. Since the airbag must be deployed properly to protect a driver of a vehicle including the steering wheel, the touch sensor included in the steering wheel must be configured to minimize interference with the airbag deployment. Thus, Pryor does teach a concept of configuring a touch sensor included in a steering wheel to reduce interference with airbag deployment.

The Applicant further argues [Appeal, pg 12 3rd and 4th full paragraphs], "*None of the references, alone or in combination, make clear that the missing descriptive matter of the interaction of a touch screen with airbag deployment is necessarily present in the reference. In fact, Pryor imposes a requirement that in order to not sacrifice airbag function, the touch screen must not be where the airbag is*".

However, Examiner respectfully submits that Pryor [col. 4 lines 57-60] clearly discloses that the touch screen should not be where the airbag is or (emphasis added)

the airbag/and screen module must be another design. In other words, Pryor does not teach that the touch screen cannot be included where the airbag is, but merely teaches that the airbag or the touch screen must be configured to reduce interference with airbag deployment.

Claims 23 and 27 – "***III. Claims 23 and 27 (including independent claim 23) are not rendered obvious under over Gillespie in view of Pryor.***" **[Appeal, pg 13]**

The Applicant's arguments regarding the deployment of the airbag [Appeal, pg 13 2nd and 3rd full paragraphs] are not persuasive for the same reasons disclosed in last paragraph on page 17 of this correspondence.

The Applicant's arguments that Pryor does not teach disposing a capacitive touch sensor on a back surface of an airbag cover [Appeal, 13 4th and 5th paragraphs] are not persuasive because modifying Gillespie in view of Pryor is not based on the concept of combining the structure of Pryor's touch screen with the structure of Gillespie's touch screen, but is based on the concept of including Gillespie's touch screen in a steering wheel by using one of Pryor's teachings.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Seokyun Moon/
Examiner, Art Unit 2629
September 10, 2009

Conferees:

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